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APPLICANT : ELECTROPLATING ENG OF JAPAN CO;

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TITLE : ELECTROPOLISHING SOLUTION FOR PLATINUM AND PLATINUM ALLOY

ABSTRACT : PURPOSE: To develop a safe electropolishing soln. not contg. poisonous cyan by incorporating a thiourea compd., thiocarboxylic acid, phosphoric acid, sulfuric acid, etc., into an electropolishing soln. for platinum-base metal.

CONSTITUTION: An electropolishing soln. contg. 0.5-15g/l thiourea compd. such as thiourea and N-methylthiourea or at least one kind of thiocarboxylic acid such as thiomalic acid, 2,2'-thiodiacetic acid and thioglycolic acid and $\geq 50\text{ml/l}$ at least one kind between phosphoric acid and sulfuric acid and added with the glycerin, polyethylene glycol, diethylene glycol, agar, gelatin, etc., for improving the polished glossiness of the plated face is used to electropolish platinum or platinum alloy. In this case, the bath temp. is controlled to 5-80°C and the current density to 25-300A/dm², an AC power source or a PR power source is used, and electropolishing is conducted with a current of 10-500Hz frequency. An electropolished face excellent in glossiness is obtained, and a platinum-base metal is electropolished easily and safely without using cyan.

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